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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,360	11/24/2003	Herve Brelay	03-1731 1496.00346	4706
24319	7590	06/30/2006	EXAMINER	
LSI LOGIC CORPORATION 1621 BARBER LANE MS: D-106 MILPITAS, CA 95035			LEE, MICHAEL	
			ART UNIT	PAPER NUMBER
			2622	

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/720,360	Applicant(s) BRELAY, HERVE	
	Examiner M. Lee	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reitmeier (6,118,486).

Regarding claim 1, Reitmeier discloses a multiple format video signal processing system showing a de-interlacer 130, a horizontal resizer 150 and a vertical resizer 140, which meet the zoom circuit as claimed, and a frame buffer 160 and read address generator 185, which meet the rate converter as claimed, except that the frame buffer is not coupled to the de-interlacer as claimed. Instead, the frame buffer is connected after the vertical resizer and functions both as a video buffer and a frame rate converter (see col. 5, line 59, to col. 6, line 23). Despite of the difference, Reitmeier and the claimed invention both have the same function. However, Reitmeier can cause "tearing" effect when a single frame buffer is used (see col. 6, lines 16-24) due different write and read clock speeds. As taught by Reitmeier, the "tearing" effect can be avoided by using two frame buffers. But the control circuit to the two frame buffers can be complicated and costly since accurate timings are needed to switch in between the two frame buffers. Another obvious solution is to maintain the single frame buffer scheme while performing the frame rate converting function at the output of the de-interlacer 130 by using the

same frame buffer 160. Since the frame rate is consistent throughout, the “tearing” effect is avoided when a single frame video buffer is used. Hence, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to employ another extra frame buffer 160 at the output of the de-interlacer 130 to perform the well known functions as claimed. Although redundancies are high, the modification would have been obvious.

Regarding claim 2, see horizontal resizer 150 and vertical resizer 140.

Regarding claim 3, see col. 5, lines 37-50.

Regarding claim 4, Reitmeier does not specify the interlacing circuit as claimed.

The Examiner takes Official Notice that using interlacing circuit for converting progressive video signal into interlaced video signal is well known in the art because such circuit is needed when displaying a progressive input signal on an interlace formatted display device. Hence, it would have been obvious to one ordinary skill in the art at the time of the invention was made to include an interlacing circuit into Reitmeier to perform the well-known functions as claimed.

Regarding claim 5, Reitmeier teaches that the output frame rate can be in any rate (col. 6, lines 4-8). Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Reitmeier so that it could operate at the 50 Hz frame rate as claimed.

Regarding claim 6, see Figure 2.

Regarding claim 7, see Figure 2.

Regarding claim 8, the output from frame buffer 160 are intended to a display device or a recording device.

Regarding claim 9, the video signal in Reitmeier can be obtained from a tuner or a playback device.

Regarding claims 10 and 11, see table I in col. 7.

Regarding claims 12-16, see corresponding rejections as set forth above.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hirano et al. (6,144,412) shows a horizontal scaling unit and a vertical scaling unit.

Richards (5,208,669) shows a zoom circuit.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Lee whose telephone number 571-272-7349. The examiner can normally be reached on Monday through Thursday from 9 to 6.

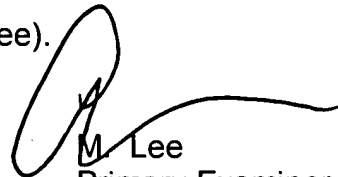
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz, can be reached on 571-272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

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M. Lee
Primary Examiner
Art Unit 2622